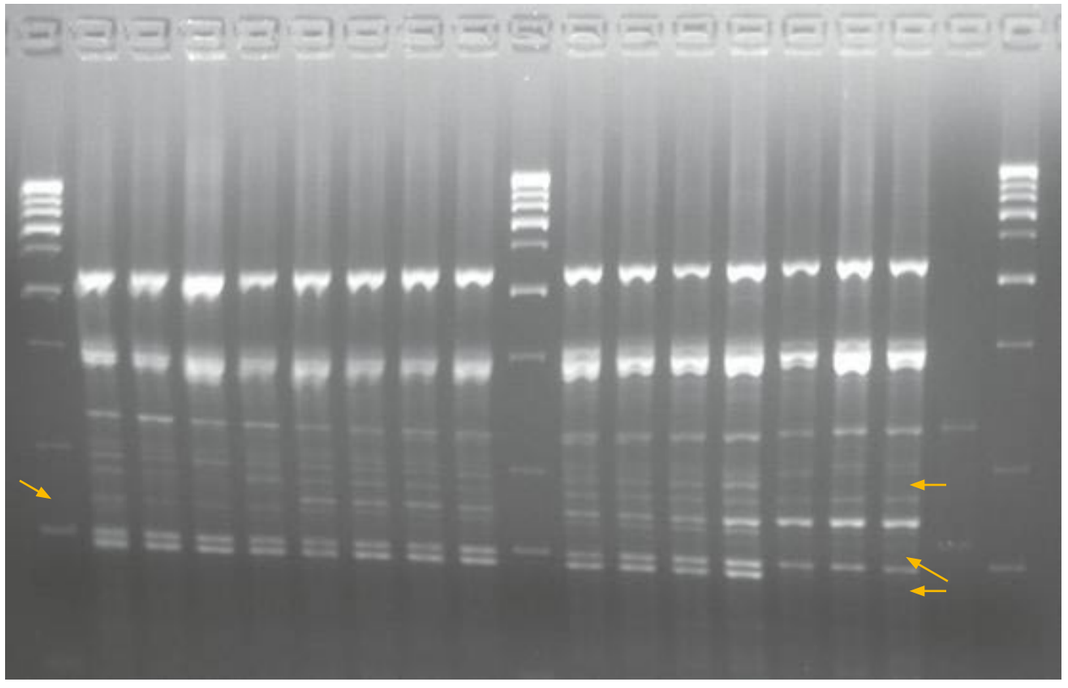
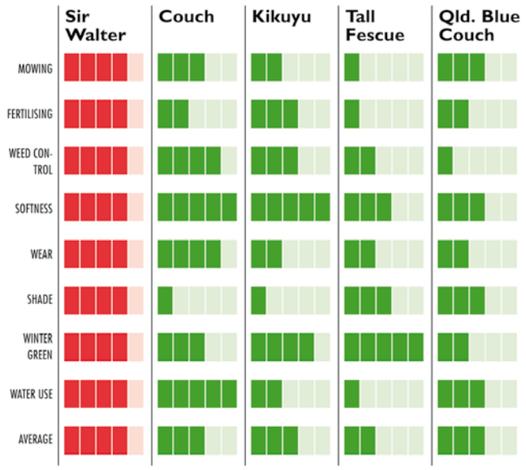


Figure 1: *Sir Walter's DNA signature developed by Professor Martin at the plant research campus of the University of Sydney to show how Sir Walter differs from other varieties. This is an example of the banding patterns gained through the RAPD technique with primer C. Lane 1, standard marker; Lanes 2-5, Sapphire; Lanes 6-9, Sir Walter; Lane 10, standard marker; Lanes 11-14, Kings Pride; Lanes 15-18, Matilda; Lane 19 standard marker. The arrows indicate areas of banding difference .*

High Performance



Source. *Turfgrass Scientific services*
(More colour bars indicate best results, less equals worst)

"Sir Walter"
PREMIUM LAWN TURF

1300 554 442
www.sirwalter.com.au

Sir Walter Turf Grass Specification

"Stenotaphrum secundatum"
PBR 1996/226

Introduction

Sir Walter (Stenotaphrum secundatum) is a versatile, sod forming, warm season C4 soft leaf buffalo turf grass that is a native to the East Coast of Australia. Being a native species it is naturalised to coastal seashore environments but is highly adaptive to a large range of climatic and soil conditions.

History of Sir Walter Premium

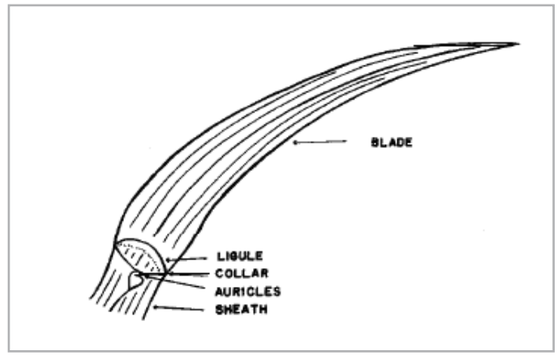
Sir Walter was selected and bred by Mr Brent Redman in the Hunter Valley region of NSW. Mr Redman, a second generation turf farmer with 30 years experience recognised a need in the market place for a high quality, shade tolerant alternative to kikuyu, couch and common hard leaf buffalo grass. The demanding Australian turf market was now requiring a lawn that would perform equally well in full sun and shade, with good drought tolerance, and, that was simple to maintain and most importantly looked good.

Mr Redman had already developed a popular variety called "Shade Master" but realised it and other local and American varieties simply didn't stand up to Australia's extreme heat, frost and drought conditions.
As a culmination of many years of research and development, 'Sir Walter' was recognised to satisfy all of the above requirements and as such was registered and subsequently granted plant breeders right in 1998.

Today Sir Walter has become Australia's most popular and biggest selling propriety grass, and by March 2007 over 15 million square metres have been sold Australia wide.

Characteristics

Sir Walter St.Augustine is an attractive turf grass with fast prostrate (horizontal) growth, purple/green stolon colour and a long dark green leaf blade that is highly infolded in mature turf, giving the grass a fine leaf appearance. Sir Walter has a pleasing blue-green colour, and has excellent colour retention. Sir Walter is hardwearing in demanding climates. Sir Walter tolerates salt, shade, cold, heat and drought. It performs well with less maintenance, fertilization and water than usually require by other Buffaloes. Sir Walter has become a very popular homeowner's and commercial grass, due to improved wear recovery and reduced weed problems.



Plant Morphology

Vernation folded; ***sheaths*** compressed, keeled, loose, slightly ciliate toward the apex and along the margins; ***ligule*** an inconspicuous fringe of hairs about 0.3mm long; ***collar*** continuous, extending through a petioled area, broad, glabrous; ***auricles*** absent; ***blades*** usually flat, petioled, 4-10mm wide, glabrous, flexuous, bluntly acute apex; ***stems*** compressed and branching with extremely long, stout, creeping stolons having swollen nodes and short internodes, leaves clustered at each node

ECOLOGY

Soil Requirements

Sir Walter performs best on well drained, fertile, sandy loam soils having a pH in the range of 5.2 to 7.5 (tolerate 4.6 to 8.1). For optimum results, the turf underlay soil must comply to Australian Standards AS4419-2003 and be applied at a depth of 100mm.

Sir Walter has a high tolerance to saline conditions and will perform as follows:

Electrical Conductivity	Performance
0 – 12 dS/m	Good
12 – 18 dS/m	Fair
Above 18 dS/m	Not Recommended

It is highly recommended to enhance the plant available soil water content of imported or site available soil by ameliorating with organic matter and or a Sir Walter approved water retention additive. (Please refer to the Sir Walter Website: sirwalter.com.au)

Moisture

Sir Walter is classified as a drought tolerant turf thus requiring low quantities of water in the form of irrigation or precipitation. Sir Walter can also withstand temporary flooding and waterlogging.

A formula for water requirement is as follows:

Days between watering (D) =

$$\frac{\text{Available water in mm/cm depth for soil type (W)} \times \text{Root depth in cm (R)} \times 0.75\ (F)}{\text{Net evaporation per day (E)} \times \text{Crop factor for grass (C)}}$$

(C) – Crop factors for various grass species are as follows:

Sir Walter Buffalo	2.5
Couch & Kikuyu	4.5
Ryegrass and Fine Fescue	6.5

Temperature

Sir Walter has been shown to perform under extreme temperature conditions of between 0°C and 42°C but grows best at temperatures between 20°C and 30°C. Sir Walter will survive under temperature conditions of Minus 11°C to 50°C.

Sir Walter is thus able to survive frost conditions and will maintain good colour throughout Summer and Winter seasons.

Light

Sir Walter can withstand Low Light Intensity caused by prolonged periods of cloud, fog or smog conditions.

It performs well in shaded positions down to 30% Sunlight and is thus an exceptional performer for underneath trees.

Location

This salt resistant turf is tolerant of salinity issues arising from wind blown salt on waterfront land and as indicated in the soil requirements section, it is able to survive in conditions up to 18 dS/ m.

AGRONOMY

Turf Installation

1. Sourcing

Sir Walter is available Australia wide. Sir Walter should only be sourced from a licensed supplier (Please refer to the Sir Walter Website: sirwalter.com.au)

Sir Walter should be weed free and free of any other foreign grasses, disease or pest.

A certificate of authenticity should accompany every delivery and must state clearly "Stenotaphrum Secundatum type Sir Walter PBR 1996/226"

2. Site Preparation

Eradicate larger debris and waste, spray any grass or weeds with Glysophate at the recommended rates at least 48 hours prior to site shaping. Site should be graded to the required levels prior to spreading imported soil to wa depth of 100mm (see soil requirements above). Drainage issues should be observed and corrected if necessary in the appropriate manner.

3. Starter Fertiliser

A phosphorous based lawn starter fertiliser should be applied to the soil to encourage fast rooting and growth of the newly laid turf.

4. Turf Laying

Install Sir Walter immediately upon delivery. Begin watering turf within 30 minutes of installation. Turf requires good ground contact and moisture at time of installing. In hot weather, protect un-laid turf by placing stacks in shade, covering with moist shade cloth, and/or sprinkling. Begin installing turf along the longest straight line, such as a driveway or footpath. Butt and push edges and ends against each other tightly, without stretching. Avoid gaps or overlaps. Stagger the joints in each row in a brick-like fashion, using a large sharp knife to trim corners, etc. Avoid leaving small strips at outer edges as they will not retain moisture. On slopes, place the turf pieces across the slope.

To avoid causing indentations or air pockets avoid repeated walking or kneeling on the turf while it is being installed or just after watering.

After installing the turf, roll the entire area to improve turf/soil contact and remove air pockets.

During the first three weeks, avoid heavy or concentrated use of new lawn area to give roots an opportunity to firmly knit with the soil.

Irrigation

Sir Walter turf will require 20mm of irrigation water within 1/2 hour of installation. Then water daily, or more often, keeping turf moist until it is firmly rooted (about 2 weeks). Then less frequent and deeper watering should begin.

Please refer to the moisture section above for a formula for irrigation scheduling.

Weather conditions will dictate the amount and frequency of watering. It is critical to adjust irrigation to suit weather patterns, make certain that newly laid turf has enough moisture to survive hot, dry, or windy periods. Water the areas near buildings and concrete paths more often where the reflected heat dries the turf more rapidly.

Mowing

New turf installations can be uneven, and care should be taken not to scalp high areas.

The first mow should normally occur within 7-10 days of installation, for the initial mow set height at least 50% higher than normal e.g. 50mm, and gradually work towards 25 mm in first two months, avoid removing more than 33% of the leaf on any one occasion, bag clippings for the first three mows to encourage root growth, removes debris from installation and assist new top growth.

Weed Control

Once established, Sir Walter is very competitive, and performs well at suppressing weeds. Only Sir Walter approved herbicides should be utilised. (Please refer to the Sir Walter Website: sirwalter.com.au).

Pesticides and Fungicides

Sir Walter has a very low incidence of pests and fungus. (Please refer to the Sir Walter Website: sirwalter.com.au)

Fertilising

Fertilise newly laid turf 6 weeks after installation with Sir Walter Lawn Fertilizer or equivalent at 25 grams per square meter and water in immediately with at least 15mm of irrigation. Nutrient efficiency is classified as good with Sir Walter as it requires 31 Kg/N per Hectare/Annum.

It is recommended for a healthy lawn fertiliser be applied four times a year.